In the Title

Please amend the title from "DNA ENCODING A DNA REPAIR PROTEIN", to -- METHODS TO ALTER LEVELS OF A DNA REPAIR PROTEIN--.

In the Claims

Please substitute the claim set entitled "Clean Version of Pending Claims" attached hereto for the pending set of claims. Specific amendments to individual claims are detailed below.

Please cancel claims 1-4, 7-15 and 19 without prejudice.

Please amend the claims as follows:

5. (Amended) A method of altering the amount of a DNA repair polypeptide in a cell, comprising:

(a) introducing into a host cell [the] an isolated nucleic acid molecule comprising a nucleic acid segment encoding a vertebrate DNA repair polypeptide having a molecular weight of about 95000 Da as determined by SDS-PAGE, or a biologically active fragment thereof, [of claim 1] operably linked to a promoter functional in the host cell, so as to yield a transformed host cell; and

(b) expressing the nucleic acid molecule in the transformed host cell as recombinant DNA repair polypeptide, wherein the amount of the recombinant polypeptide produced by the transformed cell is different than the amount of the DNA repair polypeptide produced by a corresponding untransformed cell.

6. (Amended) A method of altering the amount of a DNA repair polypeptide in a cell, comprising:

(a) introducing into a host cell a DNA segment comprising the complement of at least a portion of [the] a nucleic acid molecule [of claim 1] comprising a nucleic acid segment encoding a vertebrate DNA repair polypeptide having a molecular weight of about 95000 Da as determined by SDS-PAGE, or a biologically active

fragment thereof, operably linked to a promoter functional in the host cell, so as to yield a transformed host cell; and

(b) expressing the DNA segment in the transformed host cell as antisense RNA so as to decrease the amount of the DNA repair polypeptide in the transformed cell.

16. (Amended) A transgenic mouse whose cells contain a chimeric DNA sequence, said chimeric DNA sequence comprising:

a transcription control sequence and [the] an isolated nucleic acid molecule [of claim 1] comprising a nucleic acid segment encoding a vertebrate DNA repair polypeptide having a molecular weight of about 95000 Da as determined by SDS-PAGE, or a biologically active fragment thereof, wherein the transcription control sequence and the nucleic acid molecule are operatively linked to each other and are integrated into the genome of the mouse, and wherein the nucleic acid molecule is expressed in the transgenic mouse so as to result in said mouse exhibiting increased amounts of the DNA repair polypeptide.

17. (Amended) A method of using a transgenic mouse to screen for ~~an~~ agent that modulates a DNA repair polypeptide, comprising:

(a) administering the agent to the transgenic mouse, wherein the transgenic mouse comprises a chimeric DNA sequence comprising a transcription control sequence operatively linked to [the] a nucleic acid molecule [of claim 1] comprising a nucleic acid segment encoding a vertebrate DNA repair polypeptide having a molecular weight of about 95000 Da as determined by SDS-PAGE, or a biologically active fragment thereof, wherein the chimeric DNA sequence is integrated into the genome of the mouse, and wherein the nucleic acid molecule is expressed as the DNA repair polypeptide in the transgenic mouse; and

(b) determining whether said agent modulates the amount of the DNA repair polypeptide in the transgenic mouse relative to a transgenic mouse of step (a) which has not been administered the agent.